

Electropolymerization of 4-nitro-1,2-phenylenediamine at Gold and Glassy Carbon Electrodes and the Electrochemical Behaviour of Poly(4-nitro-1,2-phenylenediamine) Film

present work are to electropolymerize 4NoPD and to investigate the electrochemical behaviours of the polymer film formed and also the pendant nitro-group.

Y. Bin (National University of Singapore)

In our work, we report the electropolymerization of 4-nitro-1,2-phenylenediamine(4NoPD). Our initial work stem from the reported difficulty of electropolymerization of nitro-substituted compounds. Further, the electropolymerization, if feasible, could be expected to give rise to a polymer structurally different from poly(*o*-phenylenediamine) because of steric hindrance of the 4-substituted nitro-group. Of ever more interest is the oxidation of the nitro-group pendant on the polymer skeleton. Such electroactivity offers the possibility of Faradic charge storage. Chemical and/or electrochemical conversion of the nitro-group may open up possible applications in immobilization, sensors, electrocataly etc; Therefore, the main objectives of the